Docket No.

291461US0PCT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE / TO 22 JUN 2006

IN RE APPLICATION OF:

Takuji OKAMOTO, et al.

SERIAL NO:

New U.S PCT Application Based on PCT/JP05/00858

GAU:

FILED:

Herewith

EXAMINER:

FOR:

TRANSITION METAL COMPOUND AND CATALYST FOR OLEFIN POLYMERIZATION

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant(s) wish to disclose the following information.

REFERENCES

- The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references are attached, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

RELATED CASES

- Attached is a list of applicant's pending application(s), published application(s) or issued patent(s) which may be related to the present application. In accordance with the waiver of 37 CFR 1.98 dated September 21, 2004, copies of the cited pending applications are not provided. Cited published and/or issued patents, if any, are listed on the attached PTO form 1449.
- A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

CERTIFICATION

- ☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

Please charge any additional fees for the papers being filed herewith and for which no check or credit card payment is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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Additional References sheet(s) attached

Date Considered

IAP20Rec'd PCT/PTO 22 JUN 2006 SHEET OF SERIAL NO.
New 6.5 PCT ATTY DOCKET NO. U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE Form PTO 1449 (Modified) 291461US0PCT Based on PCT/JP05/00858 **APPLICANT** LIST OF REFERENCES CITED BY APPLICANT Takuji OKAMOTO, et al. **FILING DATE GROUP** Herewith **U.S. PATENT DOCUMENTS** FILING DATE DOCUMENT SUB **EXAMINER CLASS** DATE NAME CLASS IF APPROPRIATE INITIAL NUMBER AA AB **FOREIGN PATENT DOCUMENTS** DOCUMENT **TRANSLATION** DATE COUNTRY NUMBER YES NO 7CL/ NO ΕP AC 0 661 300 7/5/1995 JР NO AD 58-19309 2/4/1983 NO 10/30/1985 JP(with English abstract) ΑE 60-217209 9/14/1989 JP(with equivalent of WO 88/04526) NO AF 1-502636 NO AG 03-139504 6/13/1991 JP(with English abstract) 1/29/1992 NO AH 0 468 651 NO 03-207704 9/11/1991 JP(with English abstract) ΑI NO ΑJ 92/01723 2/6/1992 WO(with English abstract) NO 10/14/1993 WO(with English abstract) AK 93/20113 OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.) BRANDOW, Christopher G. et al., "Ancillary Ligand and Olefin Substituent Effects on Olefin Dissociation for Cationic /GL/ Zirconocene Complexes Bearing a Coordinated Pendant Olefin", Organometallics, Vol. 20, No.20, Pages 4253-4261, 2001. AL BRESLOW, David S. et al., "Bis-(cyclopentadienyl)-titanium Dichloride-Alkylaluminum Complexes as Soluble Catalysts for the Polymerization of Ethylene¹, ² ", JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, Vol. 81, Pages 81-87, January AM 5, 1959. ROBERTS, Royston M. et al., "MALONONITRILE", JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, Vol. 82, Pages 1952-1957, April 20,1960. EISCH, John J. et al., "Direct Observation of the Initial Insertion of an Unsaturated Hydrocarbon into the Titanium-Carbon Bond of the Soluble Ziegler Polymerization ctalayst, Cp2TiCl2-MeAlcl21 ", Journal of American Chemical Society, Vol. 107, AO No. 24, Pages 7219-7221, November 27,1985. JORDAN. Richard F. et al., "Ethylene Polymerization by a Cationic Dicyclopentadienylzirconium (IV) Alkyl Complex", Journal AP of American chemical Society, Vol. 108, No. 23, Pages 7410-7411, November 12, 1986. MENGELE, Winfried et al. "ansa-Metallocene Derivatives. 27. Chiral Zirconocene Complexes with Two Dimethylsilylene Bridges¹⁷, Organometallics, Vol. 12, No. 5, Pages 1931-1935, May 1993. AQ DORER, Birgit et al., "Syntheses and Structures of Titanocene, Zirconocene, and Vanadocene Dichloride Complexes with Two Ethanediyl Bridges¹", Organometallics, Vol.13, No.10, Pages 3868-3872, October 1994. AR HAYS. Melanie L. et al., "Steric Influence on the Structure, Magnetic Properties, and Reactivity of Hexa-and

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

HERZOG, Timothy A. et al., "A New Class of Zirconocene Catalysts for the Syndiospecific Polymerization of Propylene and Its Modification for Varying

Polypropylene from Isotactic to Syndiotactic", Journal of American Chemical Society, Vol. 118, No.27, Pages 11988-11989, November 27, 1996.

Octaisopropylmanganocene", Organometallics, Vol. 17, No. 25, Pages 5521-5527, December 7, 1998.

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AT

Examiner

/C Lu/ (02/07/2008)

10/584057 iAP20 Rec'd PCT/PTQ 22 JUN 2006

New U.S. PCT Application Based on PCT/JP05/00858 Takuji OKAMOTO, et al. Docket No. 291461 US

STATEMENT OF RELEVANCY

- 1) References AC & AL have been cited in the International Search Report. A copy of these references is being submitted herewith.
- 2) References have been cited in the corresponding Search Report. A copy of these references is being submitted herewith.
- 3) References AD AK & AM AT are discussed in the specification. A copy of these references is being submitted herewith.
- 4) References are additional prior art known to Applicant. A copy of these references is being submitted herewith.